



Matthew Rodriguez  
Secretary for  
Environmental Protection



## Department of Toxic Substances Control

Barbara A. Lee, Director  
700 Heinz Avenue  
Berkeley, California 94710-2721



Edmund G. Brown Jr.  
Governor

January 7, 2016

Mr. Keith S. Forman  
BRAC Environmental Coordinator  
Department of the Navy  
Base Realignment and Closure  
Program Management Office West  
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FORMER NAVAL STATION TREASURE ISLAND, SAN FRANCISCO, CALIFORNIA –  
RADIOLOGICAL UNRESTRICTED RELEASE RECOMMENDATION (RURR)  
FOR SURVEY UNITS AT SITE 12 SWDA BIGELOW COURT

Dear Mr. Forman:

The Department of Toxic Substances Control and the California Department of Public Health (CDPH) concur with the conclusions and recommendations of the *Final Status Survey Report, Non-Time Critical Removal Action for Bigelow Court Solid Waste Disposal Area (SWDA), Installation Site 12, Former Naval Station Treasure Island, San Francisco, California*, dated March 6, 2015 (FSSR). The FSSR concluded that the Survey Units at SWDA Bigelow Court are suitable for radiological unrestricted release and recommended that no further work is required to demonstrate that the Survey Units meet the criterion for unrestricted release. Enclosed please find CDPH's memorandum recommending radiological unrestricted release for the Survey Units at Site 12 SWDA Bigelow Court.

If you have any questions, please contact me at 510-540-3840 or  
[remedios.sunga@dtsc.ca.gov](mailto:remedios.sunga@dtsc.ca.gov).

Sincerely,

Remedios V. Sunga  
Brownfields and Environmental Restoration Program

Enclosure

cc: See next page

Mr. Keith Forman  
January 7, 2016  
Page 2 of 2

cc: Email Distribution

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KAREN L. SMITH, MD, MPH  
Director and State Public Health Officer

State of California—Health and Human Services Agency  
California Department of Public Health



EDMUND G. BROWN JR.  
Governor

**DATE:** January 4, 2016

**TO:** Stephen Woods  
Department of Defense Project Manager  
Center for Environmental Health  
1500 Capitol Avenue  
Sacramento, California 95899

*Stephen Woods*  
1/6/16

**FROM:** Kelvin Yamada, Chief  
Environmental Management Branch  
1616 Capitol Avenue  
Sacramento, California 95899

*Kelvin Yamada*  
1/5/16

**SUBJECT:** Radiological Unrestricted Release Recommendation for Bigelow Court Solid Waste Disposal Area (SWDA), Installation Restoration Site 12 (IR Site 12), at former Naval Station Treasure Island (NSTI), San Francisco, California.

Through the California Department of Toxic Substances Control (DTSC), the US Department of Navy (DON) seeks a radiological unrestricted release recommendation (RURR) from the Environmental Management Branch (EMB), California Department of Public Health (CDPH) for Bigelow Court Solid Waste Disposal Area (SWDA), Installation Restoration Site 12 at former Naval Station Treasure Island (NSTI), San Francisco, California. The DON request for an RURR was included in the Final Final Status Survey Report Non-Time Critical Removal Action for Bigelow Court Solid Waste Disposal Area, Installation Restoration Site 12 Former Naval Station Treasure Island San Francisco, California (March 06, 2015).

Bigelow Court is located in the northwestern part of NSTI on the south side of 13th Street, southeast of the intersection of 13th Street and Gateview Avenue. Bigelow Court is included as part of Installation Restoration (IR) Site 12. The area was originally used as a parking lot during the 1939 and 1940 Golden Gate International Exposition. After Navy occupation of the island in 1940, the site was developed as a bunker storage for munitions and other materials, vehicle and equipment storage, as well as recreational playing fields. The area was also used for burning and disposal of solid waste.



Beginning in the 1960s, areas of IR Site 12, including Bigelow Court SWDA, were incrementally developed into housing for Navy personnel and their dependents. Prior to remediation, Bigelow Court SWDA was partially covered by asphalt and with four uninhabited former Navy housing units arranged in a rectangle around the central court. The Bigelow Court SWDA work site consists of 0.54 acres. The radionuclide of concern for this site is Radium 226.

Scope of work included clearing and grubbing of vegetation; removal of asphalt and concrete surfaces; radiological survey of unoccupied former residential housing units and demolition of Buildings 1101 and 1103; radiological screening of excavated soil, asphalt, building foundations, concrete; construction of four radiological screening yards (RSYs); and the loading, transport, and disposal or recycling of waste.

SWDA Bigelow Court was divided into three Class I Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) Survey Units (SUs). SU1 consists of the southern half of the SWDA Bigelow Court excavation bottom. SU2 consists of the northern half of the SWDA Bigelow Court excavation bottom. SU3 is comprised of the sidewalls throughout the Bigelow Court SWDA excavation areas.

SU1 and SU2 consists of three trenches dug to a depth of two to four feet below ground surface to capture the various depths of the SWDA. SU3 consists of the sidewall area for the 3 trenches comprising SU1 and SU2. All exposed surfaces were subject to MARSSIM Class I survey including a 100% gamma scan. The number and location of gamma static measurements and soil samples collected were calculated using the methods specified in MARSSIM based on a triangular grid with a random starting point. Due to the irregular shape of the sidewalls in SU3, the triangular grid left many gaps in sampling coverage. To correct for these gaps, additional sidewall sampling locations were manually added to the design. A total of 84 systematic and 17 biased radiological soil samples were collected and analyzed by gamma spectroscopy in support of the final status survey. None of the analytical results exceeded the Department of Navy's screening criterion. Nine split samples were provided to CDPH for confirmatory analysis. The results of the confirmatory samples were in general agreement with the results provided in the final status document listed below.

EMB has completed its review on all submitted documents associated with identification of the radionuclides of concern, potential locations of use, and investigative surveys prior to final status surveys. EMB has reviewed previous versions of the final status survey report document. EMB comments on the documents were noted and resolved in the following document:

*Final Final Status Survey Report Non-Time Critical Removal Action for Bigelow Court Solid Waste Disposal Area, Installation Restoration Site 12, Former Naval Station Treasure Island San Francisco, California (March 06, 2015)*

Based on the review of all relevant documents submitted by DON, and the results of the subsequent confirmatory soil sample analysis by EMB, EMB recommends radiological unrestricted release for the Bigelow Court Solid Waste Disposal Area (SWDA),



Installation Restoration Site 12 at former Naval Station Treasure Island (NSTI), San Francisco, California. EMB reviewed all relevant radiological documents based on current guidance. This review meets the requirements under Title 17 of the California Code of Regulations, Section 30256(k) [17 CCR §30256(k)]. Please note that this RURR is restricted to the SUs 1, 2 and 3 as described in the document above.

If you need further assistance, please contact Sheetal Singh at 916-449-5661 or via email at [Sheetal.Singh@cdph.ca.gov](mailto:Sheetal.Singh@cdph.ca.gov).